PIONEER®
The Art of Entertainment

Service Manual

ORDER NO.
CRT1361

FM/MW/LW HIDE-AWAY RDS TUNER

GEX-T7ORDS EW

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1. SPECIFICATIONS

General

Power source	DC 14.4 V (10.8 — 15.6 V allowable)
Grounding system	Negative type
Dimensions	178(W) × 27(H) × 150(D) mm
Weight	0.7 kg

FM tuner

Frequency range	87.5 — 108 MHz
Usable sensitivity	7 dBf (0.6 μV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity	10 dBf (0.9 μV/75 Ω, mono)
Signal-to-noise ratio	70 dB (IEC-A network)
Distortion	0.3% (at 65 dBf, 1 kHz, stereo)
Frequency response	30 — 15,000 Hz (±3 dB)
Stereo separation	40 dB (at 65 dBf, 1 kHz)

MW tuner

Frequency range	531 — 1,602 kHz
Usable sensitivity	18 μV (25 dB) (S/N: 20 dB)
Selectivity	50 dB (±9 kHz)

LW tuner

Frequency range	153 — 281 kHz
Usable sensitivity	30 μV (30 dB) (S/N: 20 dB)
Selectivity	50 dB (±9 kHz)

Note:
Specifications and the design are subject to possible modification without notice due to improvements.

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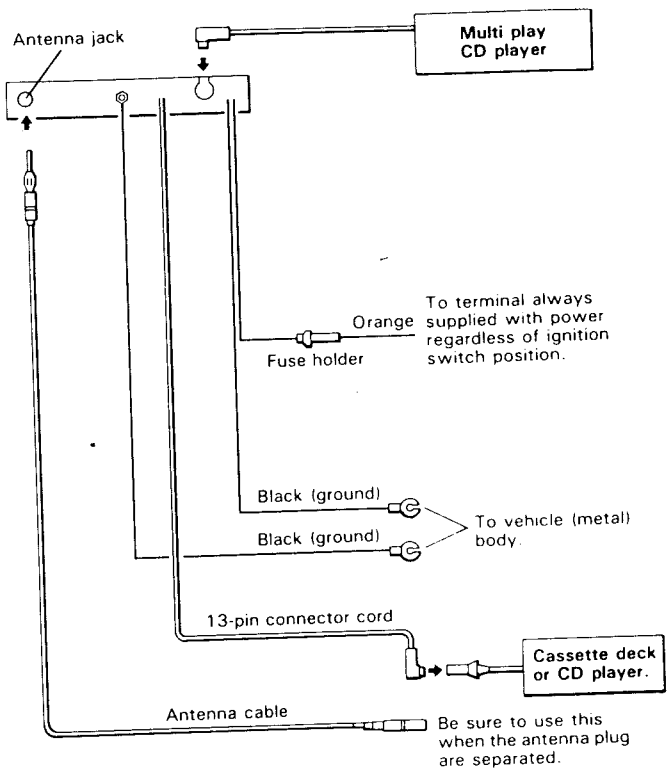
2. CONNECTING THE UNIT

Before making final connections, make temporary connections then operate the unit to check for any connecting cord problems.

- Refer to the owner's manual for details on connecting the various cords of the deck or CD player and other units then make connections correctly.
- Be sure to connect the memory power supply lead (orange) to a terminal that is always supplied with power regardless of the vehicle's ignition switch position. If this connection is made incorrectly or is forgotten, the unit will not work at all.
- When connecting the cords, be sure to fix them firmly with clamps or tape. Be sure to protect the cords from damage by taping them at places where they will contact burr.
- Wire all connecting cords so that they stay well clear of high-temperature areas such as the heater outlet.
- Do not drill a hole into the engine compartment to connect the orange power cable directly to the battery.
- Be sure to connect the ground lead (black) to the vehicle body or some other metal part that is properly grounded to the chassis. If the ground lead is not properly connected, noise may occur or the Hide-Away Tuner or deck may not operate correctly.


Antenna jack
Multi play CD player
Orange
To terminal always supplied with power regardless of ignition switch position.
Fuse holder
Black (ground)
Black (ground)
To vehicle (metal) body.
13-pin connector cord
Cassette deck or CD player.
Antenna cable
Be sure to use this when the antenna plug are separated.

3. BLOCK DIAGRAM

TUNER UNIT

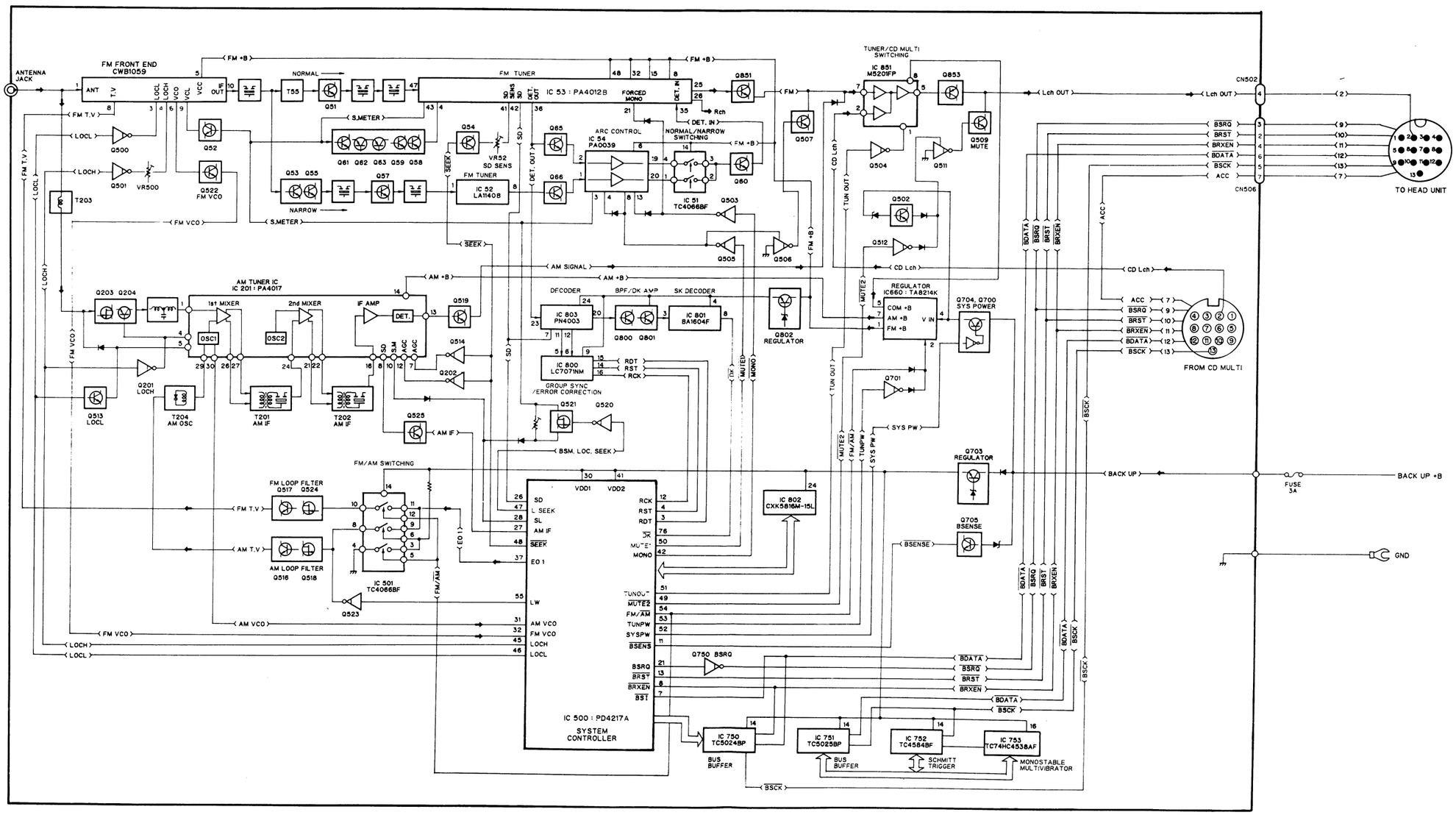


Fig. 1

4. ADJUSTMENT

● Connection Diagram

NOTICE: Select C1 so that total capacity of 80pF attained from the direction of the receiver jack.
Z: Output impedance of SSG.

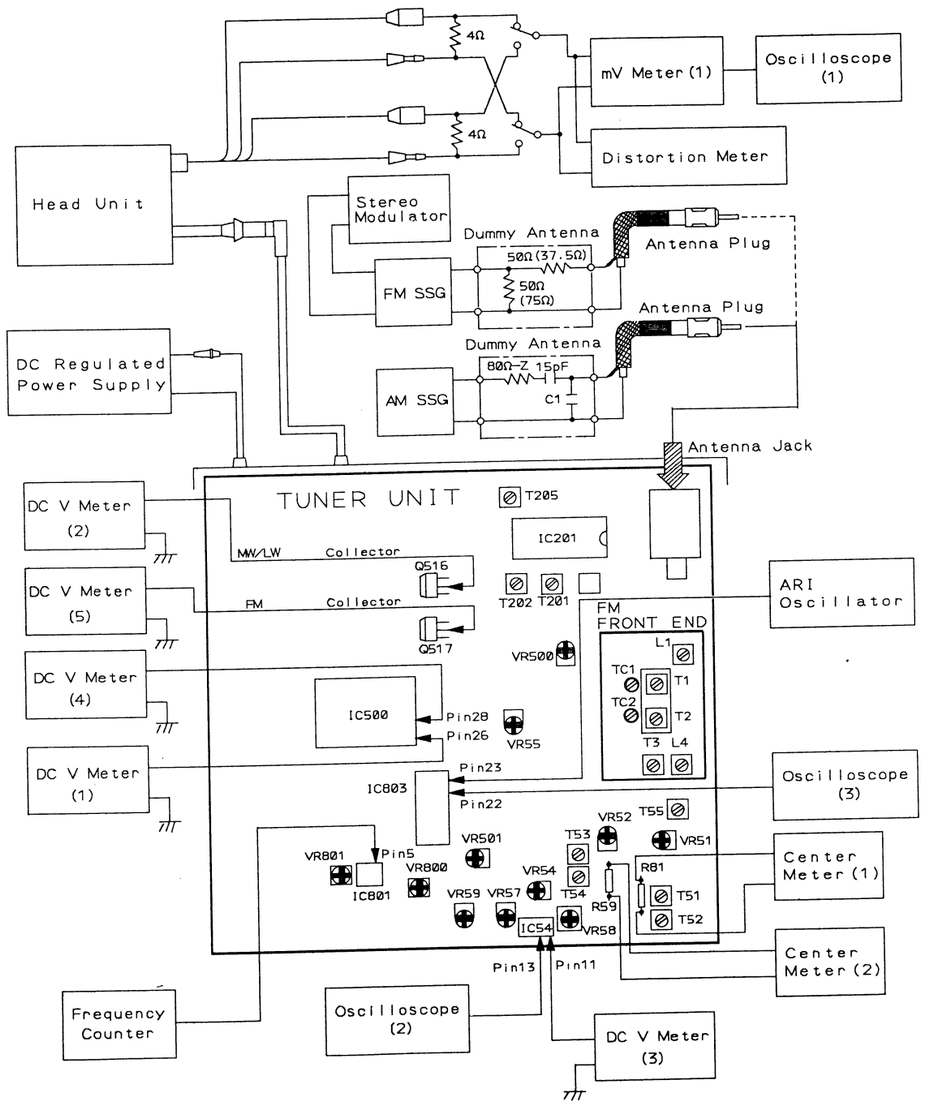


Fig. 2

FM ADJUSTMENT ※1 Stereo MOD.: 1kHz, L+R=90%, Pilot=10%

	No.	FM SSG (400Hz, 100%)		Displayed Frequency (MHz)	Adjusting Point	Adjustment Method (Switch Position)
		Frequency (MHz)	Level (dBf)			
Tuning Volt	1			108.0	L4	DC V Meter (5): 7.3V±0.1V
	2			87.5		Verify that DC V Meter (5) is 1.4±0.5v
Tracking	1	89.9	20—25	89.9	L1, T1, T2	mV Meter (1): Maximum
	2	106.1	20—25	106.1	TC1, TC2	mV Meter (1): Maximum
IFT	1	98.1	20—25	98.1	T3	mV Meter (1): Maximum
IF ※A	1	98.1	65	98.1	T51	Center Meter (1): 0
	2	98.1	65	98.1	T52	Distortion Meter: Minimum
IF ※B	3	98.1 (±2.5kHz)	65	98.1	T53	Center Meter (2): 0
	4	98.1	65	98.1	T54	Distortion Meter: Minimum
IFT ※B	1	98.1	13	98.1	T55	Oscilloscope (1): Optimum Symmetry
	2	98.1	65	98.1	T55 (*1)	Distortion Meter: Minimum
IHF ※A	1	98.1	13	98.1	VR51	Oscilloscope (1): Optimum Symmetry
Mute ※B	1	98.1※1	65	98.1		mV Meter (1): A dB (This output is A)
	2	98.1※1	14	98.1	VR55	mV Meter (1): A−3dB
ARC ※B	1	98.1※1	34	98.1	VR54	mV Meter (1): Separation 5dB
SD ※B	1	98.1	20	98.1	VR52	DC V Meter (1): 5V
LOC H ※B	1	98.1	60	98.1	VR500	DC V Meter (1): 5V
DET.	1	98.1	65	98.1	VR57, VR58	Oscilloscope (2): Minimum
IF SW	1	98.1	30	98.1	VR59	DC V Meter (3): 0V→8.3V

※A: NARROW Mode (MONO switch: ON···Head Unit)
※B: NORMAL Mode (Connect pin 8 of IC54 to pin 6···Add FM +B to pin 8 of IC54)
(*1): Rotate T55 less than ±90°

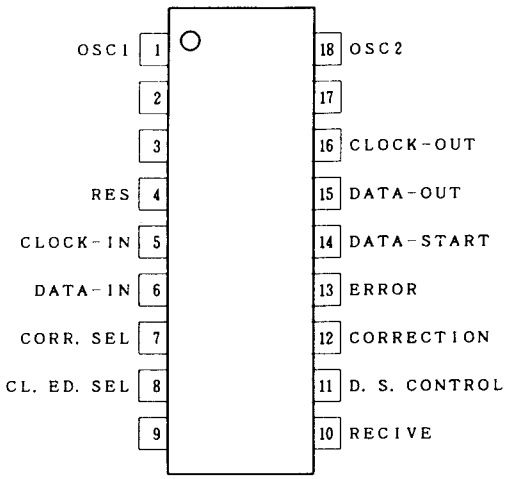
RDS ADJUSTMENT

	No.	FM SSG (400Hz, 100%)		Displayed Frequency (MHz)	Adjusting Point	Adjustment Method (Switch Position)
		Frequency (MHz)	Level (dBf)			
NF SW	1	98.1	35	98.1	VR501	DC V Meter (4) : 1.2±0.05V
57k BPF	1	ARI Oscillator SK (57kHz, 5%) 10 mVrms			VR800	Oscilloscope (3) : Maximum
DK	1	—	—	—	VR801	Frequency Counter: 125Hz±1Hz

MW/LW ADJUSTMENT

	No.	AM SSG (400Hz, 30%)		Displayed Frequency (kHz)	Adjusting Point	Adjustment Method (Switch Position)
		Frequency (kHz)	Level (dBμV)			
Tuning Volt	1	(LW MODE)		153		DC V Meter (2) : More than 2V
	2	(MW MODE)		1,602		DC V Meter (2) : Less than 6.5V
Tracking	1	999	15	999	T201, T202, T205	mV Meter (1) : Maximum

LC7071NM

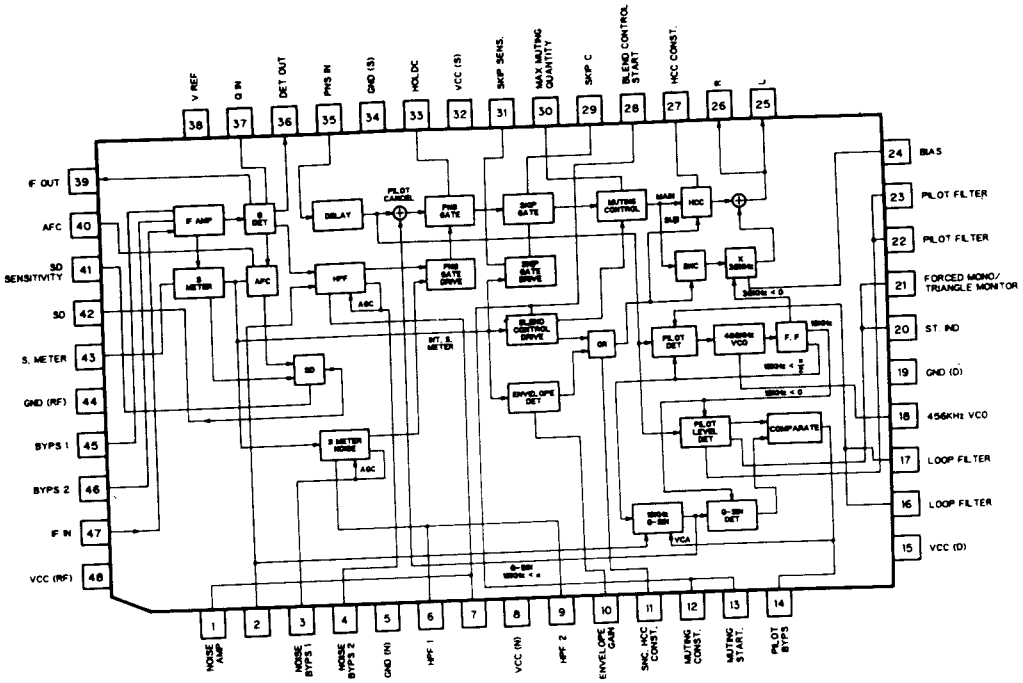


• Pin Functions (LC7071NM)

Pin No.	Pin Name	I/O	Function and Operation	Initial (when reset)
1	OSC1	Input	For connection of 4 MHz ceramic oscillator.	
18	OSC2	Output		
5	CLOCK-IN	Input	Decoded clock input for RDS.	High output
6	DATA-IN	Input	Decoded data input for RDS .	High output
7	CORR.SEL	Input	Error correction select input. Sets whether an error in RDS decoded data is to be corrected before output or not. Input = 0: Not corrected Input = 1: Error correction executed	High output
8	CL.ED.SEL	Input	Serial data clock polarity select input. Input = 0: Serial data output is valid at the rising edge of the output clock. (Serial data output changes at the falling edge of the output clock.) Input = 1: Serial data output is valid at the falling edge of the output clock. (Serial data output changes at the rising edge of the output clock.) Note: Setting is done when an RES signal is input.	High output
11	D.S.CONTROL	Input	Block data start signal control input. Input = 1: Data-start signal is output for all blocks. Input = 0: Data-start signal is output only for 2nd block.	High output
10	RECIVE	Output	RDS data reception output. After sync signal detection is complete, a low level signal is output only while serial data is being output. A high level signal is output normally. Open drain output.	High output
12	CORRECTION	Output	Error correction select output. A low level signal is output when an error in the serial output level has been corrected or when error correction is impossible, and a high level signal is output when error correction is not performed. Open drain output.	High output
13	ERROR	Output	Error present output. A low level signal is output when there is an error in the serial data output and it cannot be corrected. A high level signal is output when there is no error in the serial output data or when it has been corrected.	High output
14	DATA-START	Output	Block data start signal for serial data output.	High output
15	DATA-OUT	Output	Data output for serial data output.	High output
16	CLOCK-OUT	Output	Clock output for serial data output. Output with pull-up resister.	High output
4	RES	Input	System reset input. For resetting and restarting, a low level signal should be input for more than 4 clock cycles.	

• ICs

PA4012B



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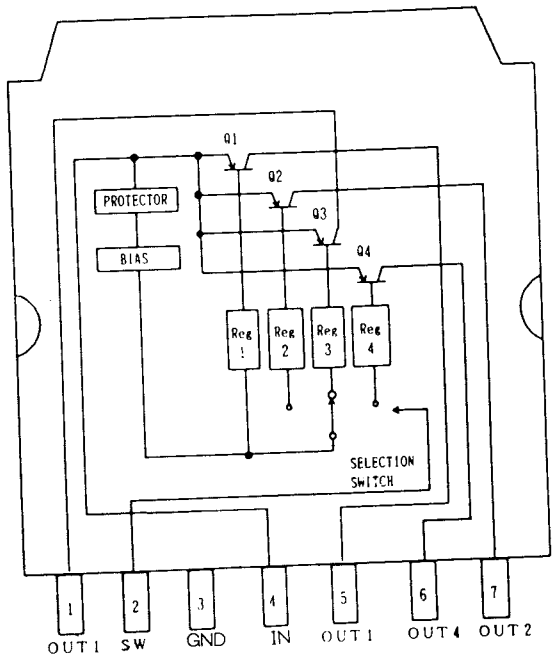

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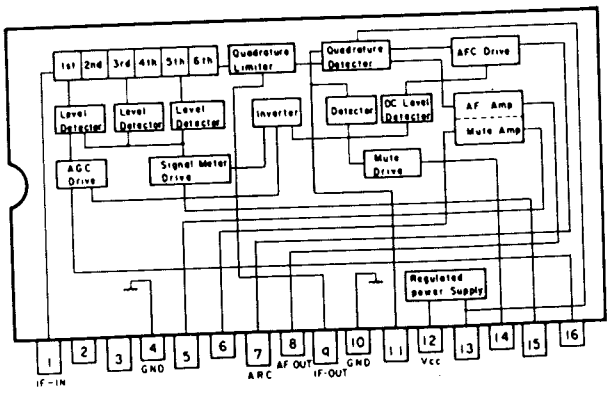

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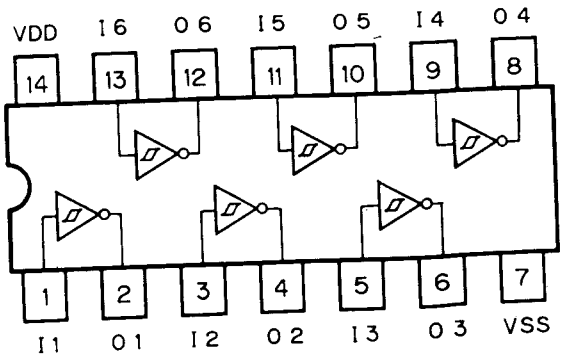

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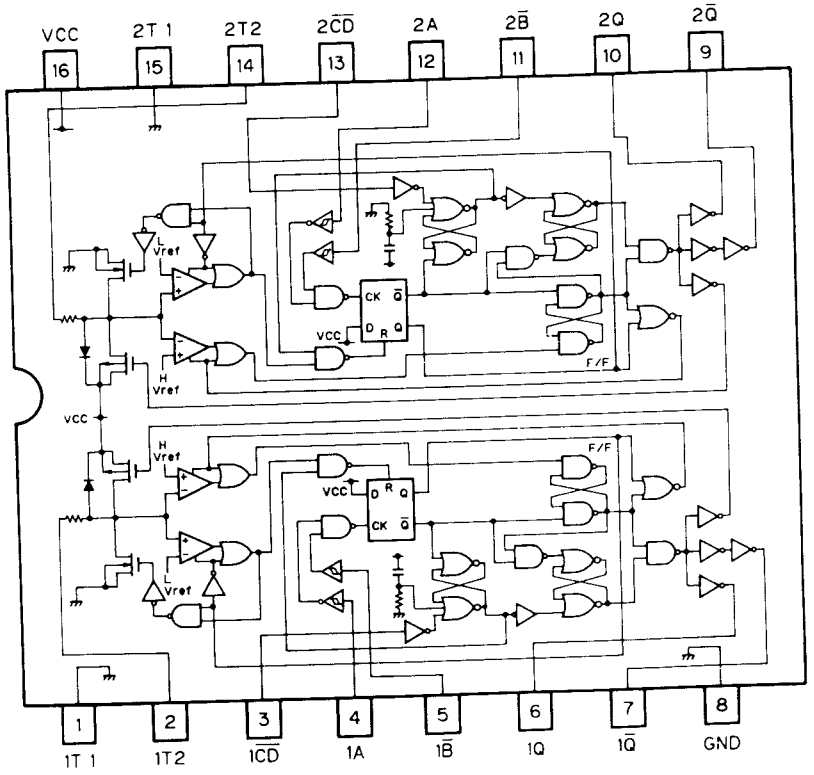
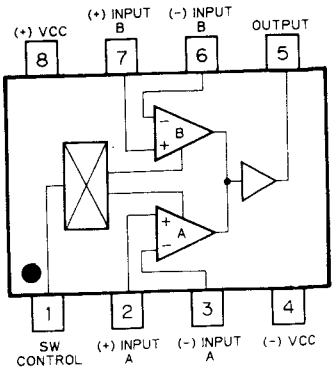


M5201FP



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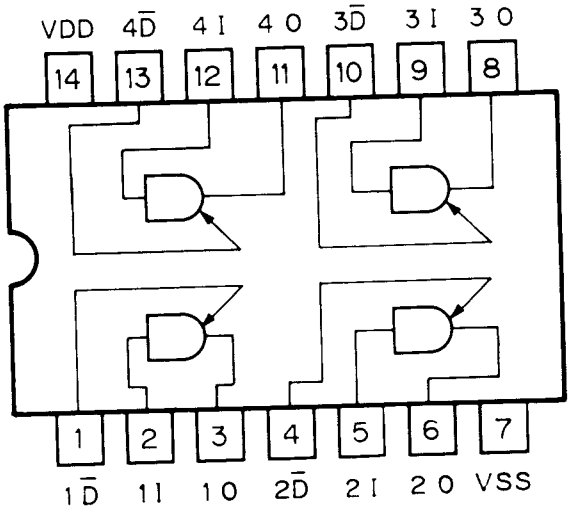
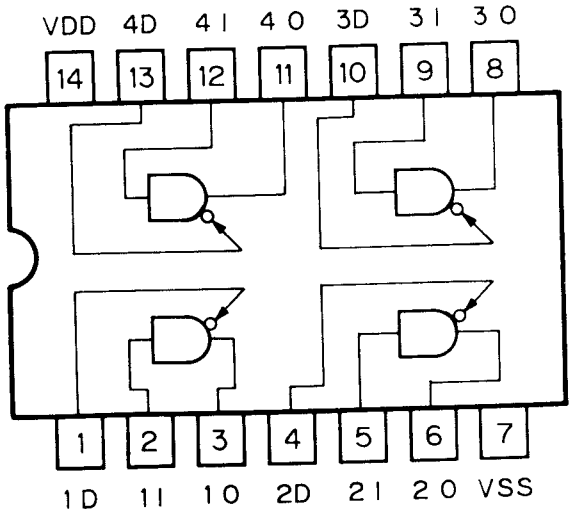
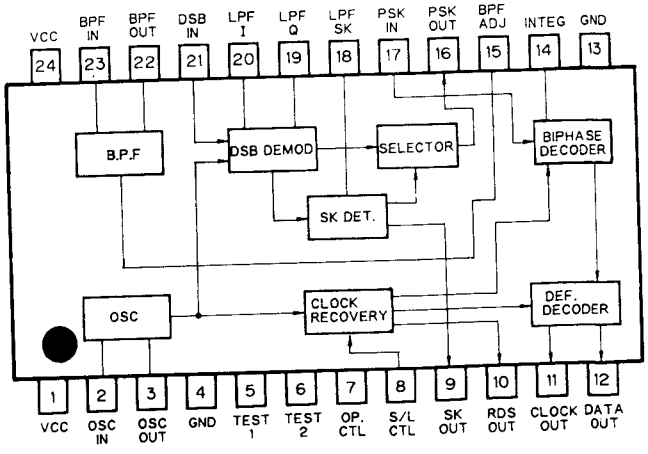


TC5024BP



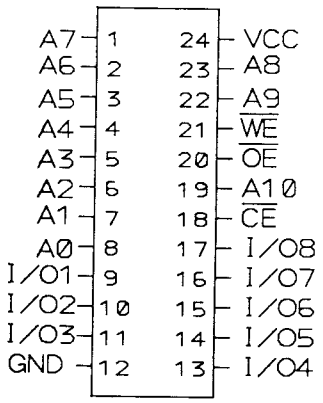
PM4003


VCC BPF IN BPF OUT DSB IN LPF I LPF Q LPF SK PSK IN PSK OUT BPF ADJ INTEG GND
24 23 22 21 20 19 18 17 16 15 14 13
B.P.F
DSB DEMOD
SELECTOR
BIPHASE DECODER
SK DET.
OSC
CLOCK RECOVERY
DEF. DECODER
VCC OSC IN OSC OUT GND TEST 1 TEST 2 OP. CTL S/L CTL SK OUT RDS OUT CLOCK OUT DATA OUT
1 2 3 4 5 6 7 8 9 10 11 12

• Pin Functions (PM4003)

Pin No.	Pin Name	I/O	Function and Operation
1	VCC		Power supply for digital circuit
2	OSC IN	Input	Crystal oscillating element connection pin
3	OSC OUT	Output	Crystal oscillating element connection pin
4	GND		Ground for digital circuit
5	TEST 1	Input	Test input pin
6	TEST 2	Input	Test input pin
7	OP. CTL	Input	Operation control input pin. "H":Operation "L":Stop
8	S/L CTL	Input	Sync signal detection mode control input pin. "H":Short mode "L":Long mode
9	SK OUT	Output	SK detection output pin Outputs low signal during SK detection.
10	RDS OUT	Output	RDS sync signal detection output pin
11	CLOCK OUT	Output	Bit rate clock output pin. "L":Stop
12	DATA OUT	Output	RDS data output pin. "L":Stop
13	GND		Ground for analog circuit
14	INTEG		Integral filter pin
15	BPF ADJ		Band pass filter fc adjustment
16	PSK OUT	Output	Bi-phase signal output pin
17	PSK IN	Input	Bi-phase decoder input pin
18	LPF SK		Low pass filter for SK detection
19	LPF Q		Low pass filter for A/D detector
20	LPF I		Low pass filter for sync signal detector
21	DSB IN	Input	DSB demodulator input pin
22	BPF OUT	Output	Band pass filter output pin
23	BPF IN	Input	Band pass filter input pin
24	VCC		Power supply for analog circuit

CXK5816M-15L



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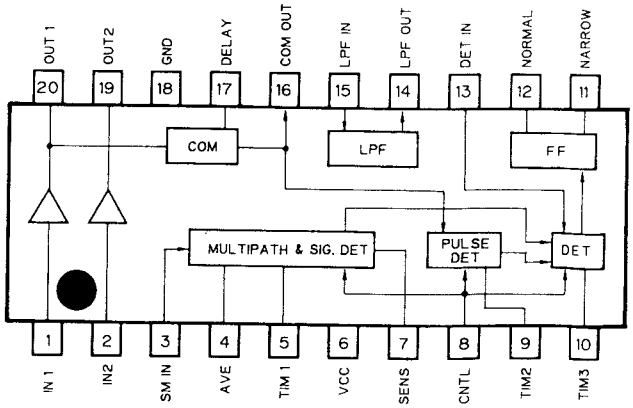

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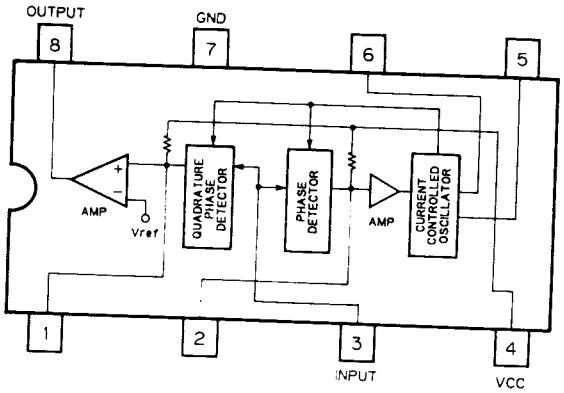

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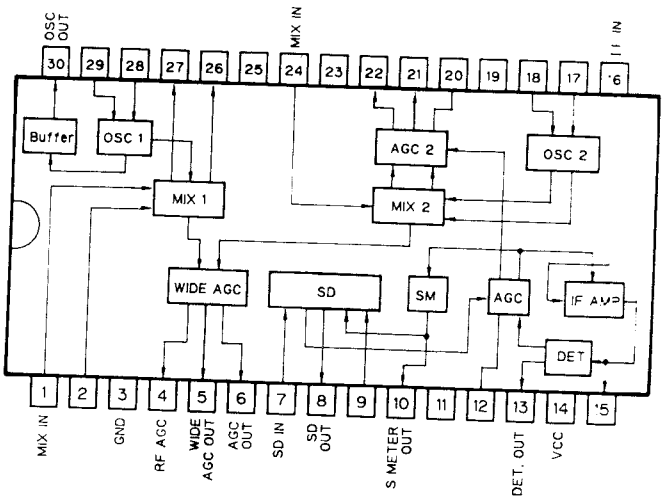

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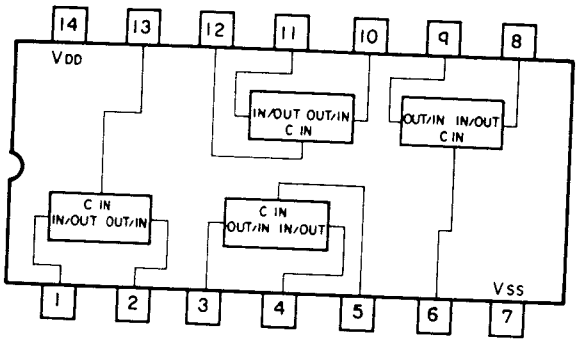
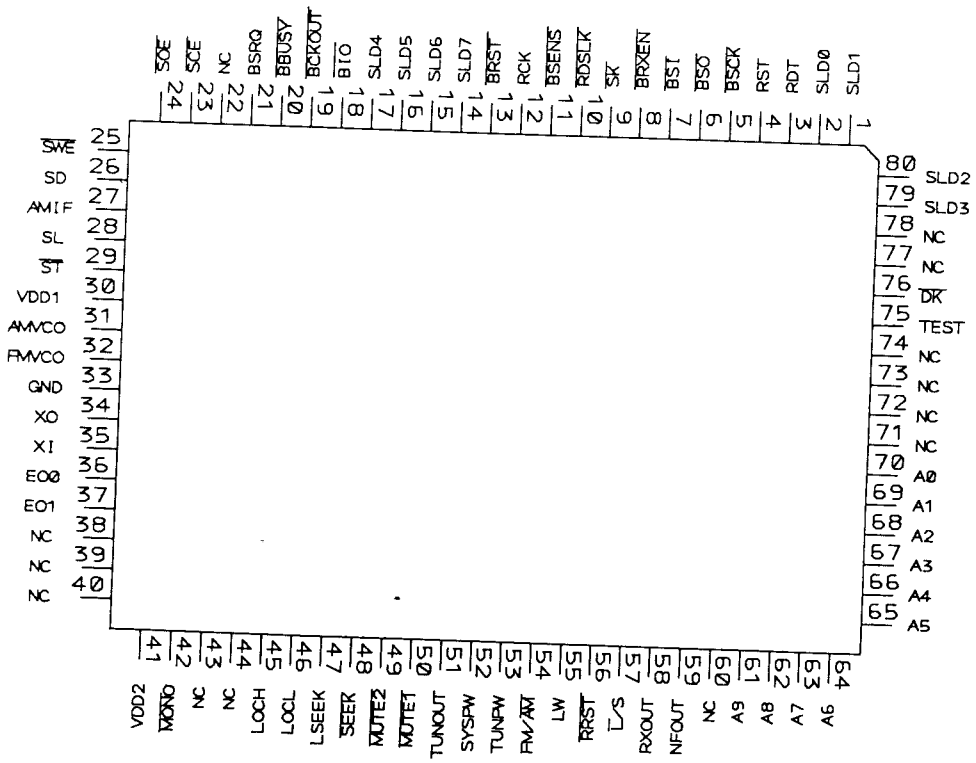


*IC's marked by * are MOS type.*
Be careful in handling them because they are very liable to be damaged by electrostatic induction.

*PD4271A



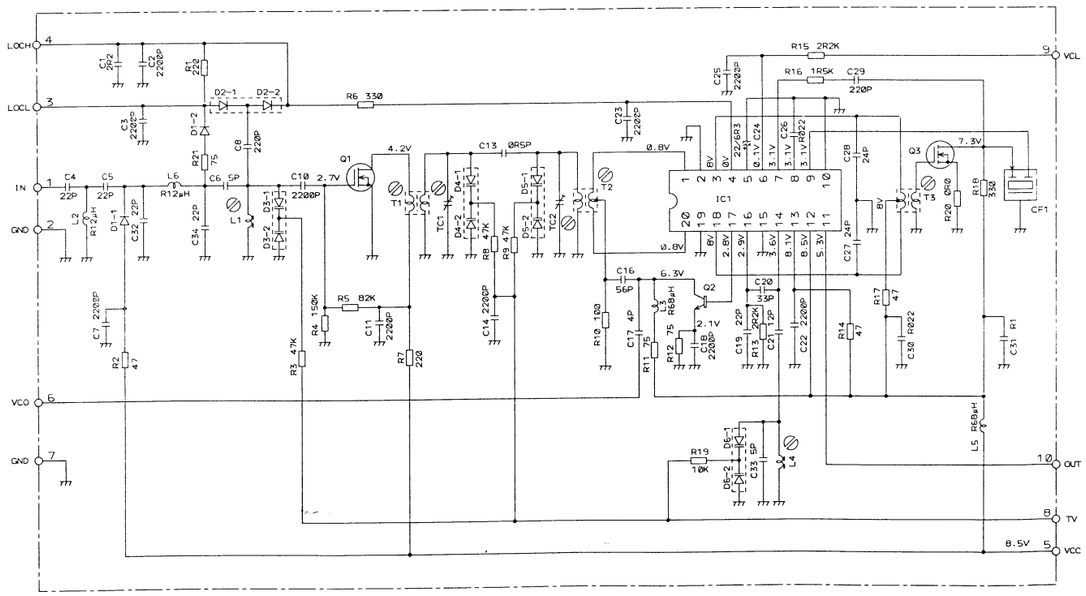
● Pin Functions (PD4271A)

Pin No.	Pin Name	I/O	I/O Format	Function and Operation
1, 2	SLD1, SLD0	I/O	C	SRAM data input/output pin
3	RDT	Input	N	RDS error correction data input pin
4	RST	Input	N	RDS data start input pin
5	$\overline{\text{BSCK}}$	Input	C	Serial clock input pin
6	$\overline{\text{BSO}}$	Output	C	Serial data output pin
7	$\overline{\text{BSI}}$	Input	C	Serial data input pin
8	$\overline{\text{BRXEN}}$	Input	C	Bus communication reception enable input pin
9	$\overline{\text{SK}}$	Input	C	SK signal input pin
10	$\overline{\text{RDSLK}}$	Input	C	RDS signal lock input pin
11	$\overline{\text{BSENS}}$	Input		Back up power sense input pin
12	RCK	Input		RDS data clock input pin
13	$\overline{\text{BRST}}$	Input	C	Bus communication reset input pin
14 — 17	SLD7 — SLD4	I/O	C	SRAM data input/output pin
18	$\overline{\text{BIO}}$	Output	N	Bus transmission/reception control output pin "H":reception, "L":transmission
19	$\overline{\text{BCKOUT}}$	Output	N	Serial clock output pin
20	$\overline{\text{BBUSY}}$	Output	N	Bus communication busy output pin
21	BSRQ	Output	C	Bus communication service request output pin
22	NC			Not used
23	$\overline{\text{SCE}}$	Output	C	SRAM chip enable output pin
24	$\overline{\text{SOE}}$	Output	C	SRAM output enable output pin
25	$\overline{\text{SWE}}$	Output	C	SRAM read/write output pin "H":read, "L":write
26	SD	Input	C	SD signal input pin
27	AMIF	Input	C	AM IF input pin
28	SL	Input	C	Signal level input pin
29	$\overline{\text{ST}}$	Input	C	Stereo broadcast detection signal input pin
30	VDD1			Device power supply terminal
31	AMVCO	Input		AM VCO signal input pin
32	FMVCO	Input		FM VCO signal input pin
33	GND			GND
34	XO	Output		Crystal oscillating element connection pin
35	XI	Input		Crystal oscillating element connection pin
36	E00	Output		PLL error output pin (Not used)
37	E01	Output		PLL error output pin
38 — 40	NC			Not used
41	VDD2			Device power supply pin
42	$\overline{\text{MONO}}$	Output	C	Forced mono output pin
43, 44	NC			Not used
45	LOCH	Output	C	Local H setup output pin
46	LOCL	Output	C	Local L setup output pin
47	LSEEK	Output	C	Outputs high signal during BSM local SEEK operation.
48	$\overline{\text{SEEK}}$	Output	C	SEEK output pin Outputs low signal during SEEK operation.
49	$\overline{\text{MUTE2}}$	Output	C	Mute output when tuner/CD multi switching
50	$\overline{\text{MUTE1}}$	Output	C	Tuner mute output pin
51	TUNOUT	Output	C	Tuner/CD multi audio signal switching control pin "H":Tuner, "L":CD multi
52	SYSPW	Output	C	System power supply control output pin
53	TUNPW	Output	C	Tuner power supply control output pin

Pin No.	Pin Name	I/O	I/O Format	Function and Operation
54	FM/$\overline{\text{AM}}$	Output	C	FM/AM power select output pin "H":FM, "L":AM
55	LW	Output	C	Loop filter switching output pin "H":LW
56	$\overline{\text{RRST}}$	Output	C	RDS data reset output pin
57	$\overline{\text{L/S}}$	Output	C	RDS decoder time constant select output pin
58	RXOUT	Output	C	RX output pin
59	NFOUT	Output	C	NF output pin
60	NC			Not used
61 — 70	A9 — A0	Output	C	SRAM address output pin
71 — 74	NC			Not used
75	TEST	Input	RDW	TEST mode input pin
76	$\overline{\text{DK}}$	Input	RDW	DK signal input pin
77, 78	NC			Not used
79, 80	SLD3, SLD2	I/O	C	SRAM data input/output pin

I/O Format	Meaning
C	CMOS Output
N	N channel open drain
RDW	With pull down resistor

● FM Front End (CWB1059)



NOTE:

Symbol indicates a resistor.
No differentiation is made between chip resistors and discrete resistors.

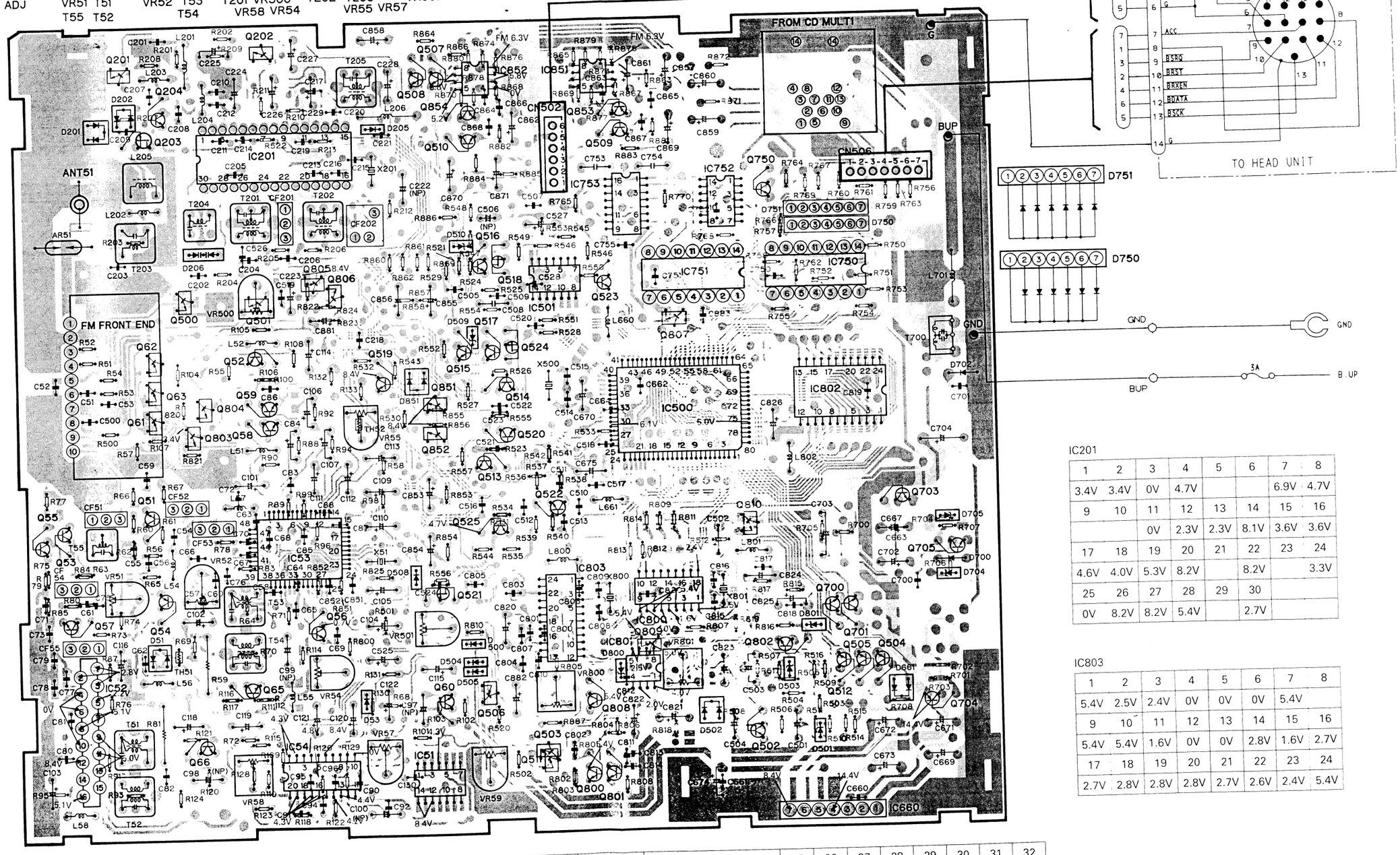
Symbol indicates a capacitor.
No differentiation is made between chip capacitors and discrete capacitors.

Decimal points for resistor and capacitor fixed values are expressed as:
2.2→2R2
0.022→R022

Fig. 3

5. CONNECTION DIAGRAM

TUNER UNIT



IC201

1	2	3	4	5	6	7	8
3.4V	3.4V	0V	4.7V			6.9V	4.7V
9	10	11	12	13	14	15	16
		0V	2.3V	2.3V	8.1V	3.6V	3.6V
17	18	19	20	21	22	23	24
4.6V	4.0V	5.3V	8.2V		8.2V		3.3V
25	26	27	28	29	30		
0V	8.2V	8.2V	5.4V		2.7V		

IC803

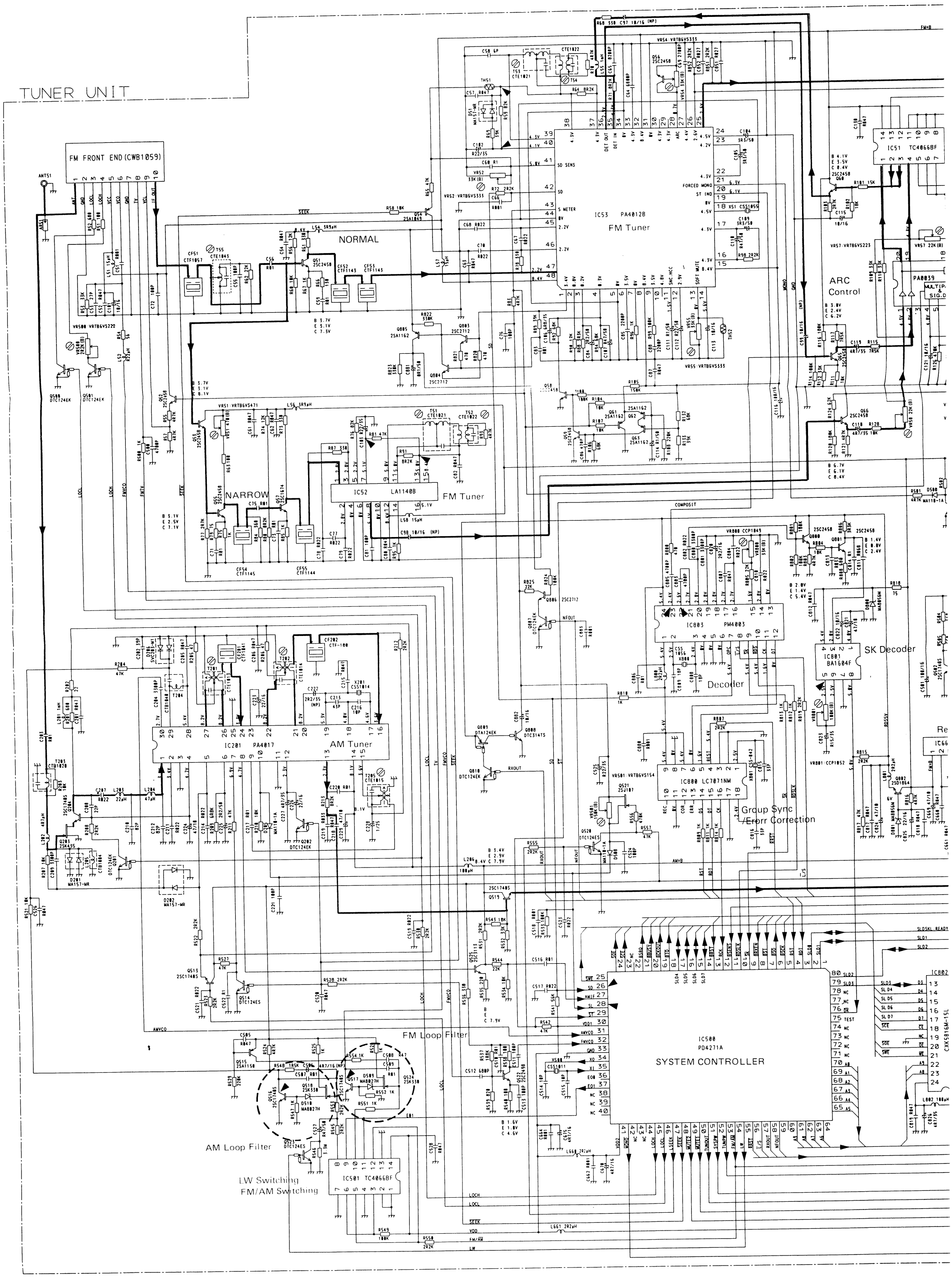
1	2	3	4	5	6	7	8
5.4V	2.5V	2.4V	0V	0V	0V	5.4V	
9	10	11	12	13	14	15	16
5.4V	5.4V	1.6V	0V	0V	2.8V	1.6V	2.7V
17	18	19	20	21	22	23	24
2.7V	2.8V	2.8V	2.8V	2.7V	2.6V	2.4V	5.4V

IC53

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
3.4V	0.8V	0.2V	0.3V	0V	3.5V	0V	8.4V	3.5V	4.8V	1.5V	2.9V	0V	5.6V	8.4V	4.3V	4.3V	4.5V	0V	6.1V	6.3V	4.3V	4.2V	4.5V	2.6V	2.6V	4.4V	0.7V	4.3V	4.3V	0V	8.4V
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48																
4.3V	0V	4.3V	2.9V	4.3V	4.3V	4.3V	4.1V	5.0V			0V	2.2V	2.2V	2.2V	8.4V																

Fig. 4

5. SCHEMATIC CIRCUIT DIAGRAM



NOTE :

- Symbol indicates a resistor. No differentiation is made between chip resistors and discrete resistors.
- Symbol indicates a capacitor. No differentiation is made between chip capacitors and discrete capacitors.

Decimal points for resistor and capacitor fixed values are expressed as:
2.2→2R2
0.022→R022

NORMAL/ NARROW Switching

Tuner/CD Multi Switching

Bus Buffer

SK Decoder

Regulator

Schmitt Trigger

Monostable Multivibrator

Bus Buffer

TO HEAD UNIT

FROM CD MULTI

CWW1292	CWW1291
D750-1	D751-1
D750-2	D751-2
D750-3	D751-3
D750-4	D751-4
D750-5	D751-5
D750-6	D751-6

IC753

INPUT			OUTPUT		NOTE
A	B	$\overline{CD}$	Q	$\overline{Q}$	
↓	H	H	⎍	⎍	OUTPUTENABLE
X	L	H	L	H	INHIBIT
H	X	H	L	H	INHIBIT
L	↓	H	⎍	⎍	OUTPUTENABLE
X	X	L	L	H	INHIBIT

Fig. 5

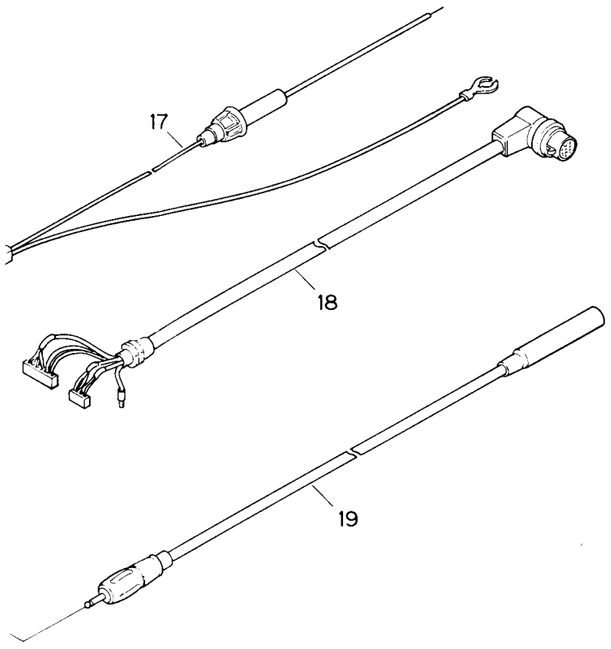


Fig. 6

NOTE:

- *The parts marked with "◉" may need long time to supply and their supply is subject to refuse as the case may be.*
- *Because the parts with encircled number shown on the dismantling drawing are not spare parts, we are unable to supply them in principle.*

● Parts List

Mark	No.	Description	Part No.
	1	Case	CNB1384
	2	Screw	PMS30P050FZK
◉	3	Tuner Unit	CWM2358
	4	Screw	BMZ26P040FZK
	5	Connector	CKS1832
	6	Holder	CNC3320
	7	Plug	CKS-788
	8	Connector	CKS1469
	9	Holder	CNC3321
	10	Screw	BMZ30P060FMC
	11	IC	TA8214K
	12	Antenna Jack	CKX1006
	13	FM Front End	CWB1059
	14	Insulator	CNM2846
	15	Screw	BMZ30P050FMC
	16	Chassis	CNA1314
	17	Cord Assy	CDE2915
	18	Cord Assy	CDE2917
	19	Sub Feeder	CDH-048
	20	Insulator	CNM2836
	21	Mounting Angle	CNB-720

8. PACKING METHOD

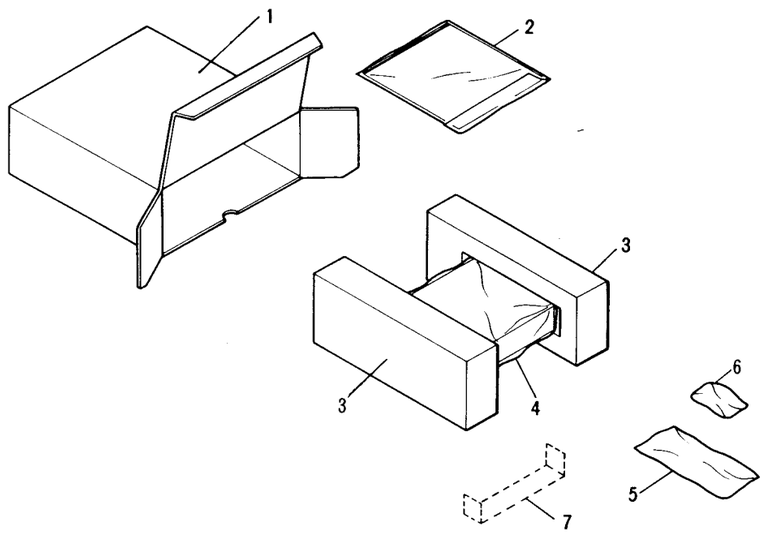


Fig. 7

NOTE:

- *Parts whose parts numbers are omitted are subject to being not supplied.*

● Parts List

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	Carton	CHG1843		6	Accessory Assy	CEA-782
	2-1	Owner's Manual	CRD1390		6-1	Screw (×4)	BNC50P160FMC
	2-2	Owner's Manual	CRB1209		6-2	Split Pin (×4)	B20-223-F
	2-3	Fastener (×2)	CNM-667		6-3	Screw (×5)	CBA-101
	2-4	Card			6-4	Screw (×4)	CBA-102
	2-5	Caution Card			6-5	Cord	CDE-437
	3	Styrofoam	CHP1295		6-6	Nut (×4)	NF50FMC
	4	Cover	CEG-157		6-7	Washer (×4)	WA45F130M080
	5	Sub Feeder	CDH-048		7	Mounting Angle	CNB-720

* Owner's Manual

Part No.	Model	Language
CRD1390	GEX-T70RDS/EW	English, French, Spanish, Arabic
CRB1209	GEX-T70RDS/EW	Italian

7. EXPLODED VIEW

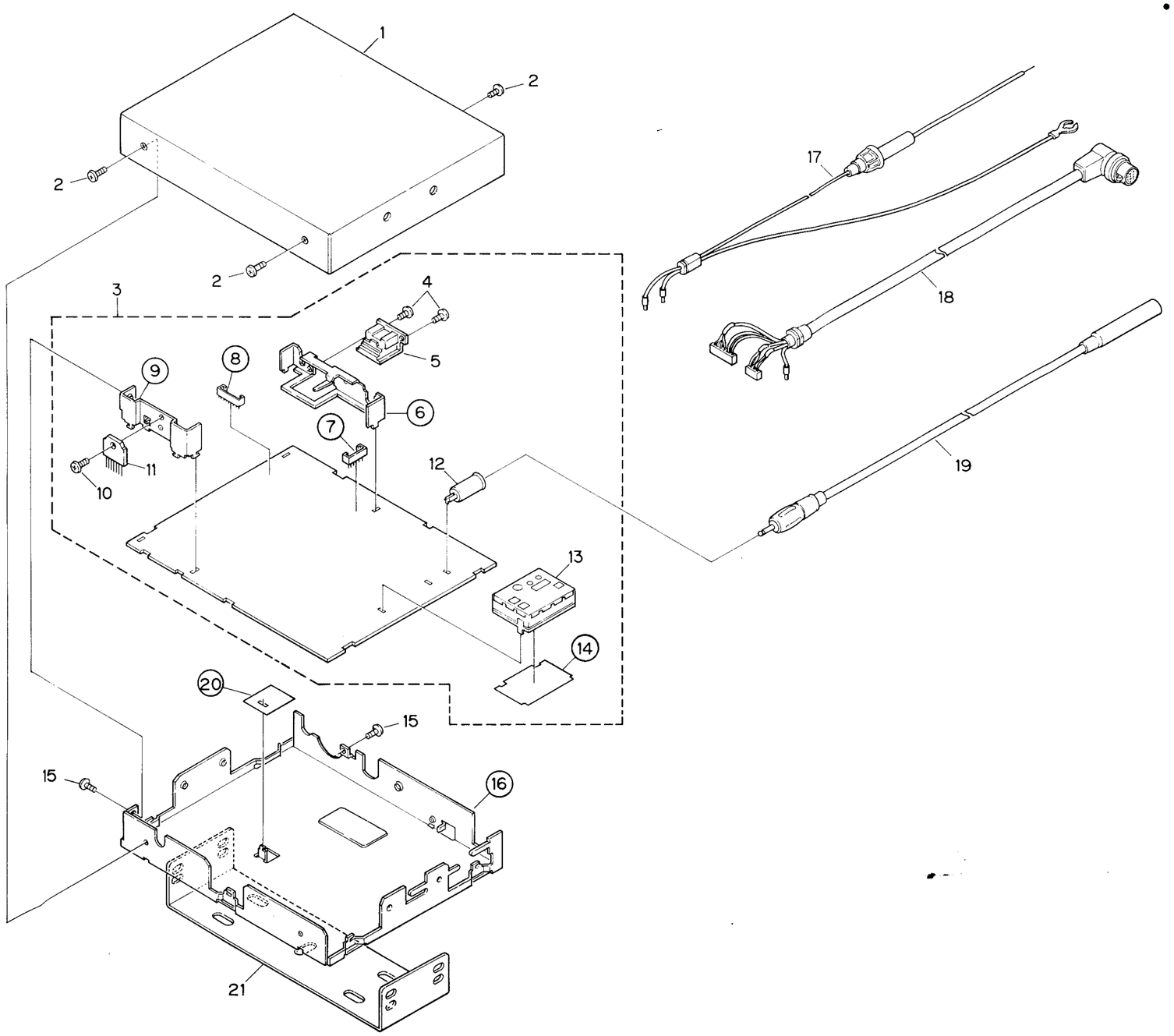


Fig. 6

NOTE:

- *The parts marked with "◉" may need long time to supply and their supply is subject to refuse as the case may be.*
- *Because the parts with encircled number shown on the dismantling drawing are not spare parts, we are unable to supply them in principle.*

● Parts List

Mark	No.	Description	Part No.
	1	Case	CNB1384
	2	Screw	PMS30P050FZK
◉	3	Tuner Unit	CWM2358
	4	Screw	BMZ26P040FZK
	5	Connector	CKS1832
	6	Holder	CNC3320
	7	Plug	CKS-788
	8	Connector	CKS1469
	9	Holder	CNC3321
	10	Screw	BMZ30P060FMC
	11	IC	TA8214K
	12	Antenna Jack	CKX1006
	13	FM Front End	CWB1059
	14	Insulator	CNM2846
	15	Screw	BMZ30P050FMC
	16	Chassis	CNA1314
	17	Cord Assy	CDE2915
	18	Cord Assy	CDE2917
	19	Sub Feeder	CDH-048
	20	Insulator	CNM2836
	21	Mounting Angle	CNB-720

8. PACKIN

NOTE:

- *Parts whose pa*

● Parts List

Mark	No.	Descr
C	1	Cart
	2-1	Owne
	2-2	Owne
	2-3	Fast
	2-4	Card
	2-5	Caut
	3	Styr
	4	Cover
	5	Sub

* Owner's M

Part No.	M
CRD1390	(
CRB1209	(

9. ELECTRICAL PARTS LIST

NOTE:

- *Parts whose parts numbers are omitted are subject to being not supplied.*
- *The part numbers shown below indicate chip components.*

Chip Resistor

RS1/8S □□□J, RS1/10S □□□J

Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

Unit Number :
Unit Name : Tuner Unit

MISCELLANEOUS

Mark	Circuit Symbol & No.	Part Name	Part No.
IC	51		TC40663F
IC	52		LA1143
IC	53		PA4012B
IC	54		PA0036
IC	201		PA4017
IC	500		PD4277A
IC	501		TC40663F
IC	660		TA8214K
IC	750		TC5024BP
IC	751		TC5025BP
IC	752		TC4584BF
IC	753		TC74HC4538AF
IC	800		LC7071NM
IC	801		BA1604F
IC	802		CXK5816M-15L
IC	803		PM4003
IC	851 852		M52015P
Q	51 52 53 55 56 58 59 60 65 66		2SC2458
Q	54		2SA1049
Q	57		2SC1674
Q	61 62 63	Chip Transistor	2SA1162
Q	201 202	Chip Transistor	DTC124EK
Q	203		2SK439
Q	204		2SC1740S
Q	500 501 503	Chip Transistor	DTC124EK
Q	502 513 516 517 519		2SC1740S
Q	504 505 512 514 520 523		DTC124ES
Q	506 511	Chip Transistor	DTA124EK
Q	507 508		2SD1468S
Q	509 510		DTC314TS
Q	515		2SA1150
Q	518 524		2SK330
Q	521		2SJ107
Q	522		2SC2498
Q	525		2SC3113
Q	700 701		DTC114ES
Q	703		2SD1864
Q	704		2SB1243
Q	705		2SC2458
Q	750		DTC124ES
Q	800 801		2SC2458
Q	802		2SD1864
Q	803 804 806		2SC2712
Q	805		2SA1162
Q	807 810	Chip Transistor	DTC124EK
Q	808		DTC314TS
Q	809	Chip Transistor	DTA124EK
Q	851 852	Chip Transistor	2SC3326
Q	853 854		2SA1049
D	51	Chip Diode	MA157-MR
D	53	Chip Diode	MA110-1A
D	201 202	Chip Diode	MA157-MR
D	205	Chip Diode	MA110-1A
D	206		SVC203-M1
D	500 501 504 505 508	Chip Diode	MA110-1A
D	502	Chip Diode	MA151WK-MT
D	503	Chip Diode	MA8082M
D	509 510	Chip Diode	MA8027H
D	661	Chip Diode	MA151WK-MT
D	700 702		ERA15-08VH
D	704	Chip Diode	MA8056M
D	705	Chip Diode	MA8075L
D	750		CWW1292
D	751		CWW1291
D	800 801	Chip Diode	MA8056M
D	851	Chip Diode	MA151WA-MN
L	51 57 58	Inductor	LAU150K
L	52	Inductor	LAUR22M
L	54 56	Inductor	LAU3R9K
L	55	Inductor	CTF1126
L	201	Ferri-Inductor	CTF1026
L	202	Ferri-Inductor	LAU4R7K
L	203	Ferri-Inductor	LAU220K
L	204	Ferri-Inductor	LAU470K
L	205	Coil	CTB1004
L	206	Ferri-Inductor	CTF-157
L	660 661	Ferri-Inductor	LAU2R2M
L	701	Choke Transformer	CTH1087
L	800 801	Ferri-Inductor	LAU2R2M
L	802	Ferri-Inductor	LAU101K
T	51 53	Coil	CTE1021
T	52 54	Coil	CTE1022
T	55	Coil	CTE1043
T	201	Coil	CTE1013
T	202	Coil	CTE1014
T	203	Coil	CTB1020
T	204	Coil	CTB1040
T	205	Coil	CTE1015
T	700	EMI Filter	CCG1006
TH	51 52	Thermister	DTN-T204D154K
CF	51	Filter	CTF1057
CF	52 53	Ceramnic Filter	CTF1143
CF	54	Ceramnic Filter	CTF1145
CF	55	Ceramnic Filter	CTF1144
CF	201	Ceramic Filter	CTF1041
CF	202	Filter	CTF-100
X	51	Ceramic Resonator	CSS1055
X	201	Crystal Resonator	CSS1014
X	500	Crystal Resonator	CSS1011
X	800	Crystal Resonator	CSS1056
X	801	Ceramic Resonator	CSS-042
VR	51	Semi-fixed 470Ω (B)	VRTB6VS471
VR	52 54 55	Semi-fixed 33kΩ (B)	VRTB6VS333
VR	57	Semi-fixed 22kΩ (B)	VRTB6VS223
VR	58	Semi-fixed 22kΩ (B)	CCP1048

Mark	Circuit Symbol & No.	Part Name	Part No.
VR	59	Semi-fixed 47kΩ (B)	VRTB6VS473
VR	500	Semi-fixed 2.2kΩ (B)	VRTB6VS222
VR	501	Semi-fixed 150kΩ (B)	VRTB6VS154
VR	800	Semi-fixed 33kΩ (B)	CCP1049
VR	801	Semi-fixed 100kΩ (B)	CCP1052
AR	51	Surge Protector	DSP-201M
		FM Front End	CWB1059

RESISTORS

Mark	Circuit Symbol & No.	Part Name	Part No.
R	51 63		RS1/10S101J
R	52		RS1/10S681J
R	53 109 110 112		RS1/10S333J
R	54		RS1/10S560J
R	55 57 70 83 93		RS1/10S472J
R	56 74 90		RS1/10S123J
R	58 60 107 128		RS1/10S103J
R	59		RD1/4PS823JL
R	61 68 73 78 87		RS1/10S331J
R	62		RS1/10S223J
R	64 71 80 91		RS1/10S822J
R	65		RS1/10S473J
R	66		RS1/10S131J
R	67 95 96		RS1/10S102J
R	69 89		RS1/10S393J
R	72		RS1/10S222J
R	75 85		RS1/10S102J
R	76		RS1/10S823J
R	77 103		RS1/10S272J
R	79		RS1/10S750J
R	81		RD1/4PS473JL
R	84		RS1/10S361J
R	88 118 122 123		RS1/10S332J
R	92 94 106		RS1/10S683J
R	98		RS1/10S222J
R	99 100 114		RS1/10S104J
R	101		RS1/10S153J
R	102		RS1/10S183J
R	104		RS1/8S103J
R	105		RS1/10S154J
R	108		RS1/10S224J
R	111	Chip Resistor 10kΩ	CCN1030
R	115 117		RS1/10S752J
R	116 120		RS1/10S184J
R	121		RS1/10S472J
R	124		RS1/10S623J
R	126 129		RS1/10S474J
R	130		RS1/10S824J
R	131		RS1/10S103J
R	132		RS1/10S683J
R	133		RS1/10S393J
R	201		RS1/10S681J
R	202		RS1/10S220J
R	203 207 210		RS1/10S103J
R	204 211		RS1/10S473J
R	205 206		RS1/10S470J
R	208 212		RS1/10S222J
R	209		RS1/10S682J
R	213		RS1/10S822J
R	500 507 516 525 526 547 551 552 554		RS1/10S102J
R	501 509 524		RS1/10S472J
R	502		RS1/10S392J
R	503 538		RS1/10S101J
R	504 505 510 511 514 515		RS1/8S561J
R	506 543		RS1/10S103J
R	508 512 517 542 557		RS1/10S473J
R	520		RS1/10S332J
R	521		RS1/10S103J
R	522 523 528 530 531 545 550 553		RS1/10S222J
R	527		RS1/10S473J
R	529		RS1/10S224J
R	532		RS1/10S333J
R	533 549		RS1/10S104J
R	534		RS1/10S103J
R	535		RS1/10S221J
R	536		RS1/10S331J
R	537		RS1/10S182J
R	539		RS1/10S821J
R	540		RS1/10S101J
R	541		RS1/10S563J
R	544		RS1/10S223J
R	546		RS1/10S335J
R	548		RS1/10S152J
R	555 807 815 819 851 852 859 860		RS1/10S222J
R	556		RS1/10S474J
R	700 701 707		RS1/10S473J
R	702 703		RS1/8S561J
R	704		RS1/10S103J
R	705		RS1/10S101J
R	706		RS1/10S472J
R	708		RS1/10S332J
R	750 751 753 754 766 768		RS1/10S473J
R	752		RS1/10S104J
R	755		RS1/10S154J
R	756 759 761 763 764 767 769		RS1/10S681J
R	757		RS1/10S563J
R	758		RS1/10S334J
R	760		RS1/10S184J
R	762		RS1/8S823J
R	765 770		RS1/10S154J
R	800 820 821		RS1/10S471J
R	801		RS1/10S184J
R	802 824		RS1/10S104J
R	803 816 867 868		RS1/10S472J
R	804		RS1/10S103J
R	805		RS1/10S223J
R	806		RS1/10S332J
R	808		RS1/10S681J
R	809 810 811 812 813 814		RS1/10S102J
R	817 857 858 885 887		RS1/10S473J
R	818		RS1/10S750J
R	822 823		RS1/10S334J
R	825		RS1/10S223J
R	853 854 855 856 871 872 883 884		RS1/10S223J
R	861 862 863 864 875 876 877 878		RS1/10S104J
R	865 866 873 874		RS1/10S333J
R	869 870		RS1/10S682J
R	879 880 881 882		RS1/10S102J
R	886		RS1/10S101J

CAPACITORS

Mark	Circuit Symbol & No.	Part Name	Part No.
C	51 66		CKSQYB102K50
C	52 54 57 61 62 63 80 82 87		CKSQYB473K25
C	53		CCSQCH270J50
C	55		CCSQRH101J50
C	56 59 71 73 75 83		CKSQYB103K50

Mark	Circuit Symbol & No.	Part Name	Part No.
C	58		CCSQCH060D50
C	60		CKSQYB104K25
C	64		CKSQYB682K50
C	65		CKSQYB822K50
C	67 68 70 77 78 79 91 92 94		CKSQYB223K50
C	69		CKSQYB272K50
C	72 76 81		CCSQSL101J50
C	84		CEA2R2M50L2
C	85 88 95 96		CKSQYB222K50
C	86		CCSQSL471J50
C	90		CKSQYB561K50
C	97 98 99		CEA100M16NPLL
C	100		CEAR22M50NPLL
C	101 113 115 121		CEA100M16L2
C	102 103		CSZAR22K35
C	104 105 109 122		CEA3R3M50L2
C	106		CEA6R8M35LS
C	107 110		CEAR47M50L2
C	111 114		CEA0R1M50L2
C	112		CEAR22M50L2
C	116 120		CEA101M16L2
C	118 119		CEA4R7M35L2
C	130 201 205 206 215 218		CKSQYB473K25
C	202		CCSQCH390J50
C	203 217 220		CKSQYB103K50
C	204 209		CKSQYB332K50
C	207 211 214		CKSQYB223K50
C	208		CCSQCH220J50
C	210 212		CCSQCH820J50
C	213		CCSQCH430J50
C	216		CCSQCH100D50
C	219		CKSQYB333K25
C	221		CCSQSL101J50
C	222		CEA2R2M35NPLL
C	223 226		CEA220M16L2
C	224 229		CEA470M10L2
C	225		CEA2R2M50L2
C	227		CEA4R7M35L2
C	228		CSZA010K25
C	500		CKSQYB472K50
C	501		CEA101M16L2
C	502 503 504		CEA4R7M35L2
C	505 520 528		CKSQYB473K25
C	506	4.7μF/16V.	CCH1005
C	507 509 510 516		CKSQYB103K50
C	508		CQEA474J63
C	511 513		CCSQCH101J50
C	512		CKSQYB681K50
C	514 515		CCSQCH100D50
C	517 519		CKSQYB223K50
C	518 662 664		CKSQYB102K50
C	521 523		CKSQYB223K50
C	522		CKSQYB104K25
C	524		CCSQSL101J50
C	525		CSZAR22K35
C	526	Chip Capacitor 0.047μF	CCG1008
C	527		CEAR47M50L2
C	660 661 663 700 701 750 751 752 755		CKSQYB473K25
C	667 669 674		CEA470M10L2
C	670 675		CASA4R7M16
C	671		CEA4R7M35L2
C	672		CEA331M10L2
C	673		CEA010M50L2
C	702		CEA220M16L2
C	703 704	3300μF/16V	CCH1037

Mark	Circuit Symbol & No.	Part Name	Part No.
C	753 754		CQMA102J50
C	800 801		CKSQYB332K50
C	802 804 810		CKSQYB223K50
C	803 805		CKSQYB472K50
C	806		CKSQYB103K50
C	807 812 817 818 819		CKSQYB473K25
C	808 809		CCSQCH180J50
C	811		CKSQYB683K25
C	813		CKSQYB333K25
C	814		CKSQYB104K25
C	815 816		CCSQCH330J50
C	820		CSZA2R2M16
C	821 824 861 862		CEA470M10L2
C	822 853 854 859 860 869 870		CEA100M16L2
C	823		CSZAR15K35
C	825		CEA220M16L2
C	826		CEA4R7M35L2
C	851 852		CKSQYB273K50
C	855 856		CEAR47M50L2
C	857 858		CEA010M50L2
C	863 864		CCSQSL101J50
C	865 866 867 868 880		CKSQYB102K50
C	871		CEA331M10L2
C	881		CEA0R1M50L2
C	882		CEA100M16L2
C	883		CKSQYB102K50